Geographic Information System

Zonal Statistics & Map Layout

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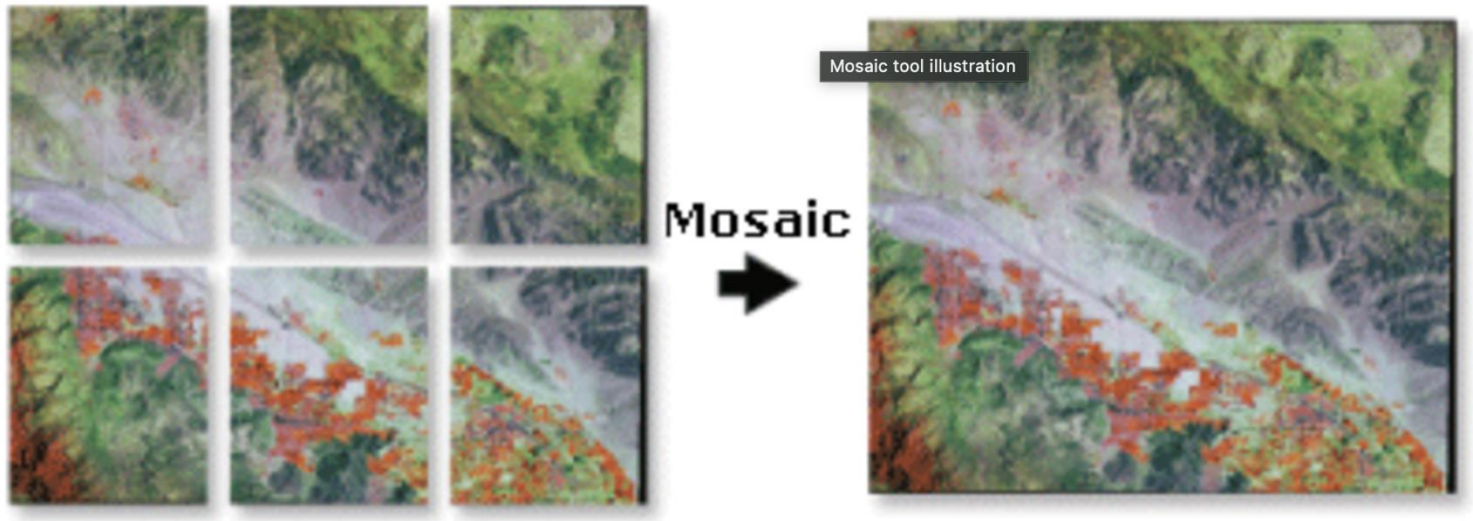
Photo credit: ChatGPT

Outline

- Mosaic To New Raster
- Contour
- Hillshade
- Slope
- Viewshed
- Zonal Statistics
- Map Layout

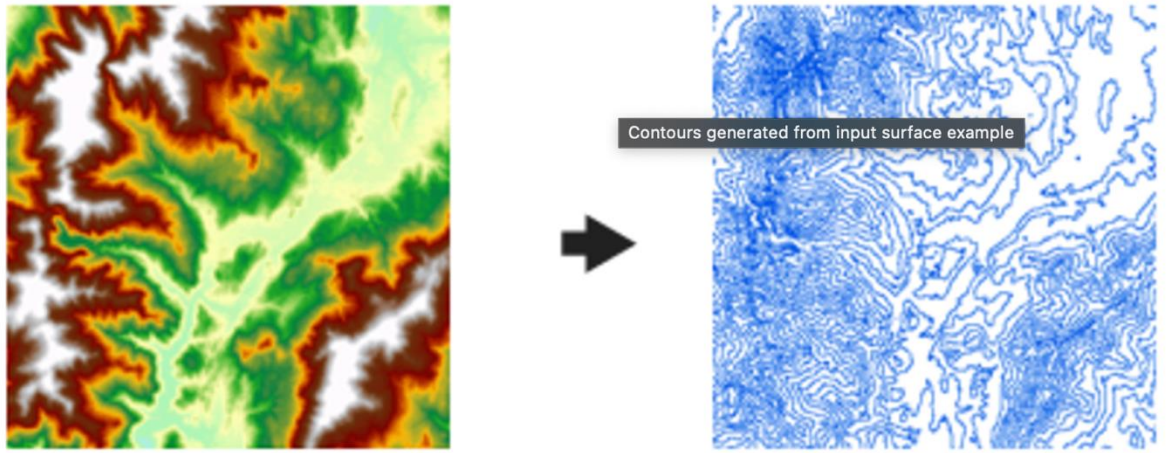
Mosaic To New Raster

- Merges multiple existing raster datasets or mosaic datasets into an existing raster dataset.
- You must set the pixel type to match your existing input raster datasets, e.g., 8-bit unsigned and 8-bit signed.



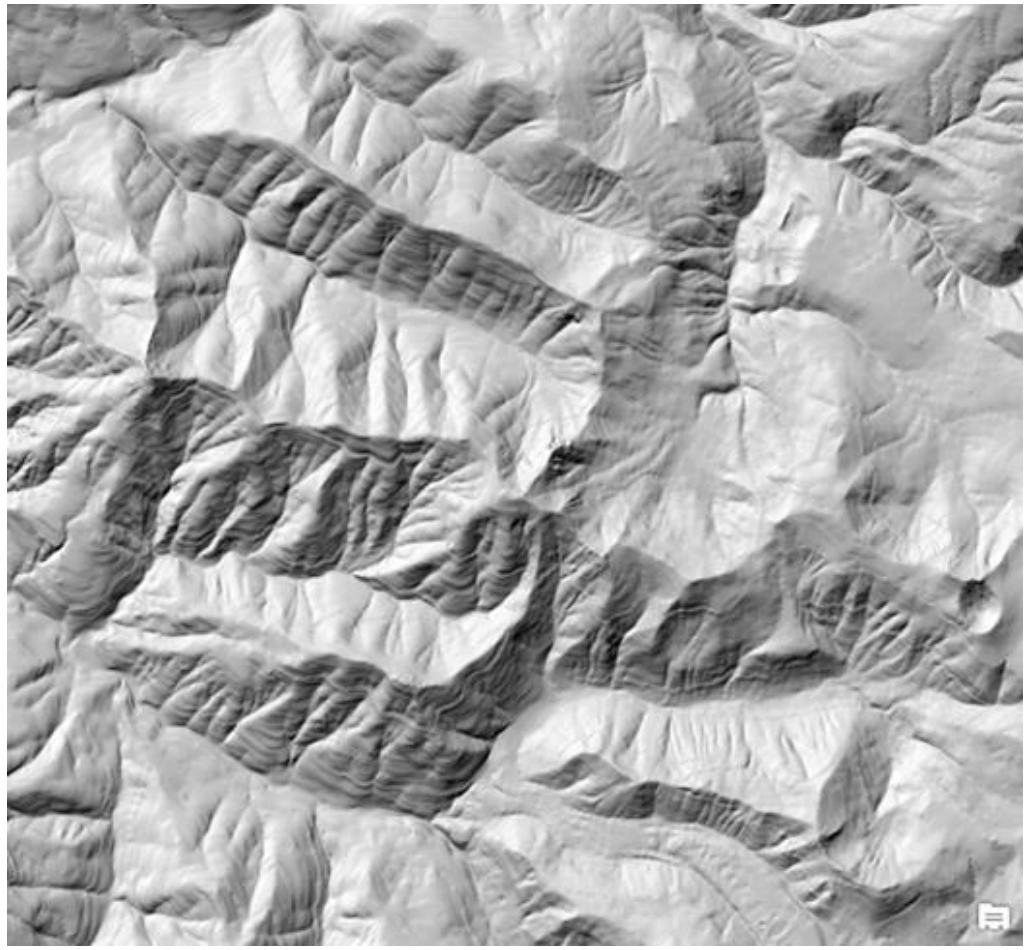
Contour

- Creates a feature class of contours from a raster surface.
- Contours are lines that connect locations of equal value in a raster dataset that represents continuous phenomena such as elevation, temperature, precipitation, pollution, or atmospheric pressure.



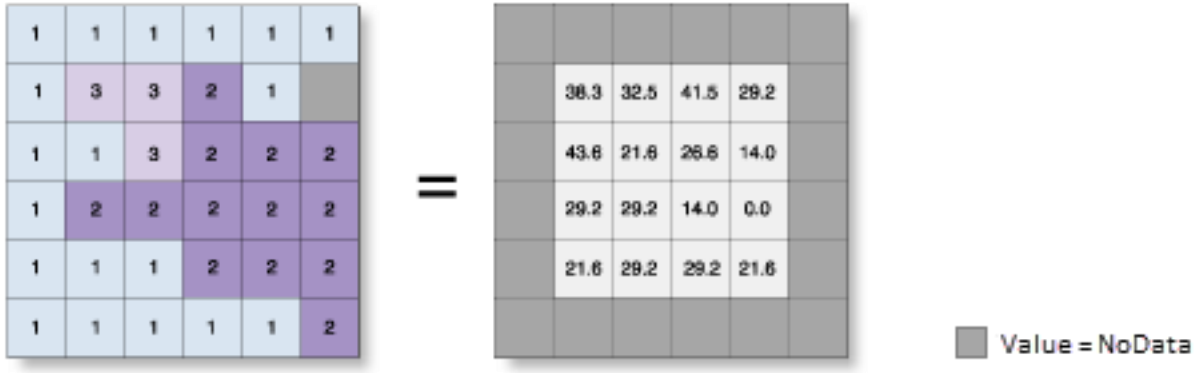
Hillshade

- The Hillshade function produces a grayscale 3D representation of the terrain surface, with the sun's relative position taken into account for shading the image. Hillshading is a technique for visualizing terrain determined by a light source and the slope and aspect of the elevation surface.



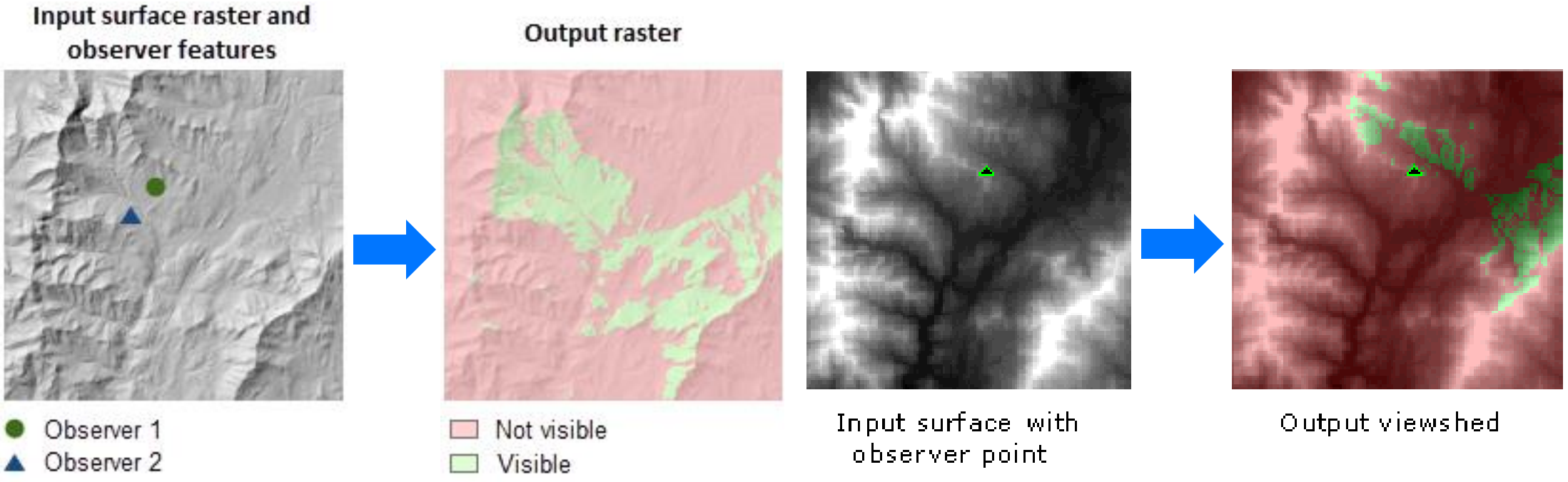
Slope

- Identifies the slope (gradient or steepness) from each cell of a raster. The Surface Parameters tool provides a newer implementation and enhanced functionality.
- The Slope tool identifies the steepness at each cell of a raster surface. The lower the slope value, the flatter the terrain; the higher the slope value, the steeper the terrain.



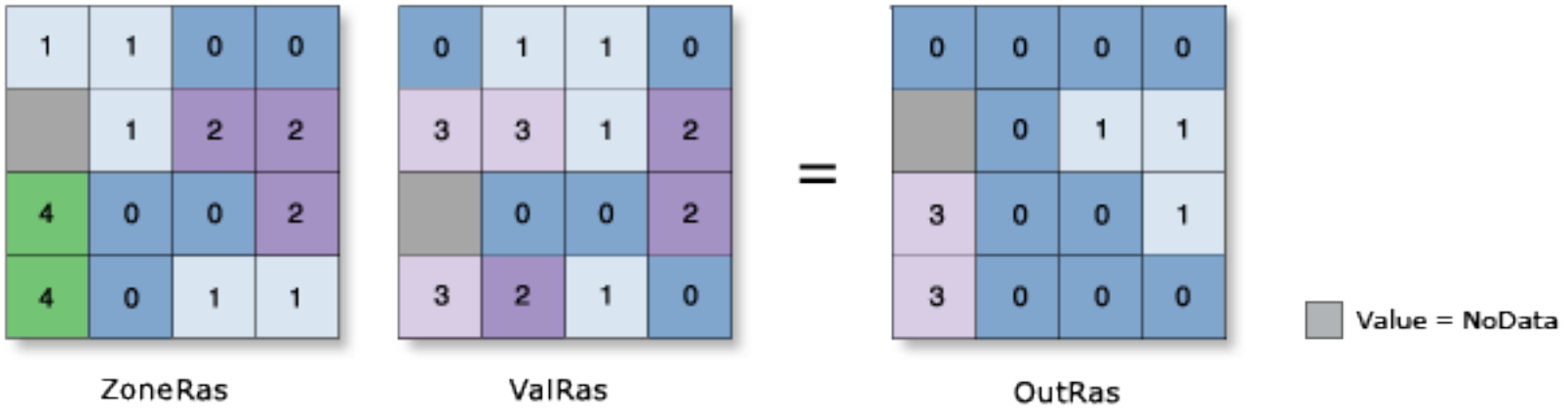
Viewshed

- Determines the raster surface locations visible to a set of observer features. The Geodesic Viewshed tool provides enhanced functionality or performance.



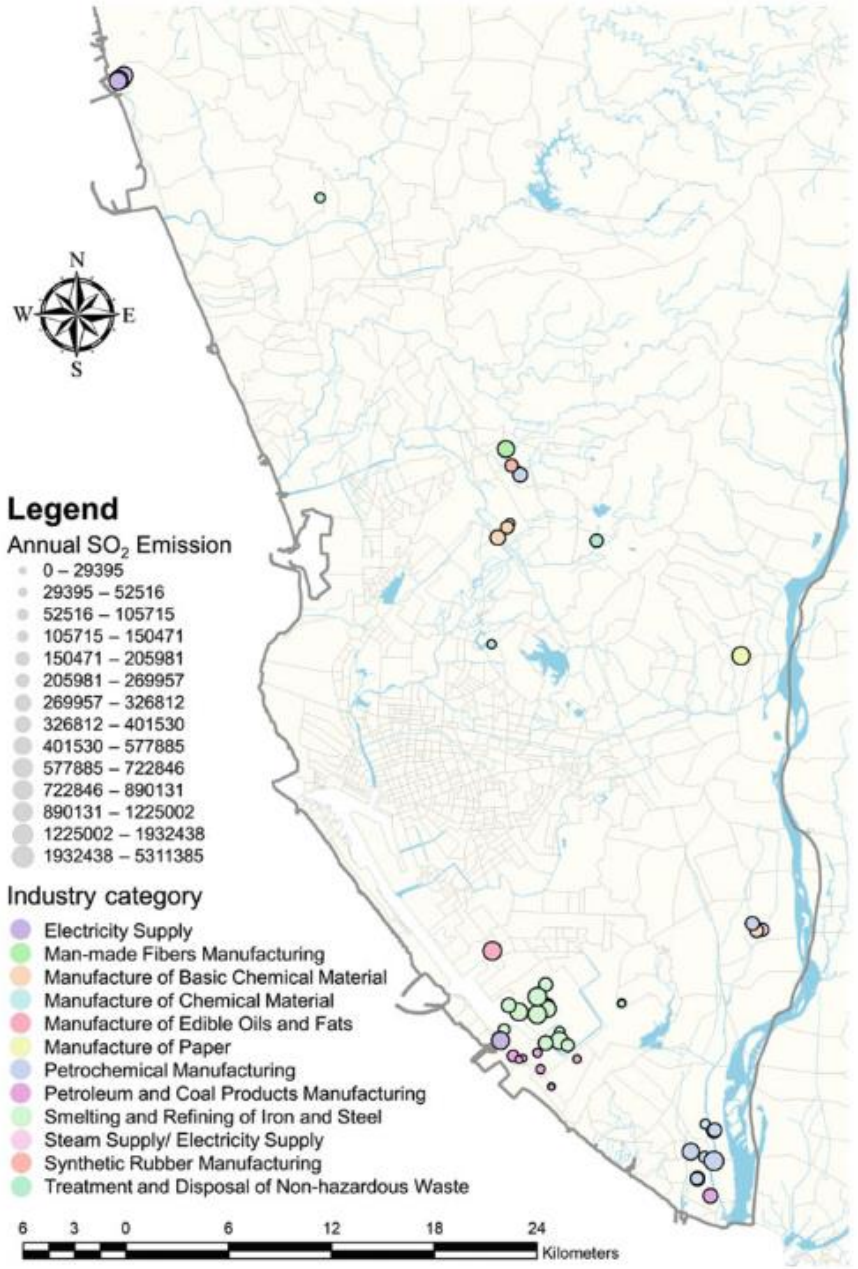
Zonal Statistics

- Summarizes the values of a raster within the zones of another dataset. A zonal statistics operation is one that calculates statistics on cell values of a raster (a value raster) within the zones defined by another dataset.
- Example, … $\boldsymbol{Min(x)}$



Map Layout

- As a map, you need to show lots of essential information to explain your map, such as …
  1) Title of Map
  2) North Arrow
  3) Legend
  4) Scale Bar
  5) Chart (optional)
  6) Map (optional)



The End

Thank you for your attention!

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